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Comparative Psychology Is Dead! Long Live Comparative Psychology

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The study of behavior of nonhuman organisms is today, as it has been for a century, a vital and active area within psychology. Comparative psychology is, therefore, by definition, alive and well. The recent resurgence in interest in evolutionary and ecological approaches to the study of comparative psychology reflects developments in ethology, sociobiology, and behavioral ecology. The ability of comparative psychologists to incorporate these modern biological approaches to the study of animal behavior into their work, while maintaining traditional focus on the study of developmental and causal problems, is a sign of strength in the field, not a sign of incipient demise. Neither revisionist histories of nor epitaphs for comparative psychology are needed.

Discussion of the past, present, and future health of comparative psychology has been a "growth industry" for at least a decade now, and I must confess to some trepidation at joining the fray at so late a date. My discomfiture arises in large part from my failure to see clearly an issue amenable to discussion. There does not seem to be agreement either as to what comparative psychology is today or was in its reputed golden age or ages. In consequence, questions about the health, death, rebirth, and so forth of comparative psychology seem to be unanswerable. Depending on what one means by comparative psychology, it can be argued that the field never existed (Lorenz, 1950), was stillborn (Hodos & Campbell, 1969), died in its prime (Lockhard, 1971), is alive but ailing (Adler, Adler, & Tobach, 1973), or is in robust health (Dewsbury, 1984).

There can be little question as to the historical definition of comparative psychology. The term referred to psychological study of nonhuman organisms, encompassing portions of areas we refer to today as physiological psychology, behavior genetics, behavioral endocrinology, psychopharmacology, animal learning, animal psychophysics, developmental psychobiology, and so forth. Although the study by psychologists of animals other than man is less dominant within experimental psychology than it was 20 years ago, it is surely alive and well. Indeed, I would be surprised if there are not more psychological journals, books, and newsletters, more psychological conferences, and more psychologists involved with the study of animals today than ever before. The relative loss of influence of comparative psychology is the result of increased vigor in cognitive and developmental work with humans and increased activity in behavioral biology, rather than a decline in comparative psychological per se.

If, however, one adopts a narrow definition of comparative psychology, problems with the health of the field seem to emerge. For example, Adler et al. (1973) stated:

> The rise of the rat, and later the pigeon as prototypes for the study of human behavior grew out of the behaviorist tradition. The goal of this work was to find general principles, but in the process comparison, evolutionary considerations and the study of the behavior of the animal for its own value were ignored. The choice of a particular species as a model organism for research can be defended. . . . The problem was to demonstrate to what extent the behavior patterns had generality beyond the species that was serving as a model. Only comparative psychology could establish this relationship and comparative psychology was being ignored by many researchers in favor of a pseudocomparative, problem-oriented approach. Despite these changes in emphasis, there remained a small core of devoted comparative psychologists in the United States to carry on the tradition and to provide new directions. (p. 185)

The failure of the work of the small core of devoted comparative psychologists to provide new directions that captured the imagination of the larger group of comparative psychologists is a present reality. It has little to do with the success or failure of comparative psychology in a broader, historical sense. One man's or woman's "pseudocomparative, problem-oriented research" is another's true comparative psychology, and the "pseudocomparative" approach has cast much light on behavioral issues.

As Dollard and Miller (1950) proposed, with regard to the study of animal learning:

> In using the results from [research with rats] we are working on the hypothesis that humans have all the learning capacities of rats. . . . Even though the facts must be verified at the human level, it is often easier to notice the operation of principles after they have been studied and isolated in simpler situations so that one known exactly what to look for. (p. 63)

The current success of such an approach is obvious [see, for examples, Siegel's (1983) work on addiction, Seligman's (1975) studies of learned helplessness and depression, Mineka's studies (in press) of learned phobias, etc.]. Whether such work is defined as comparative or pseudocomparative psychology, it represents an approach valuable, not only in the study of learning, but in the study of physiological, perceptual, endocrinological, developmental, and genetic influences on behavior as well.

As Adler et al. (1973) suggested, the search for general principles by North American comparative psychologists was

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accompanied by a loss of interest in evolutionary and ecological considerations. For 60 years, the orientation of Morgan, Kline, and Small was largely abandoned by comparative psychologists in favor of that advocated by Thorndike, Watson, and Tolman. The return of evolutionary and ecological considerations to comparative psychology resulted from the emergence of ethology, sociobiology, and behavioral ecology as competitors in the intellectual marketplace.

Dewsbury (1984) has argued that from a modern perspective, we should distinguish true comparative psychologists from other psychologists working with animals. Dewsbury's true comparative psychologists were not interested in generalizing from animal to man. Rather, they studied problems in the evolution of behavior, appreciated the interaction between organism and ecological niche, and worked in field settings. They described the behavior of exotic species, focusing on the animal as subject. The range of behaviors these true comparative psychologists studied was broad; the behaviors they selected for study were of ecological and evolutionary significance; true comparative psychologists made comparisons of the behavior of closely related species.

In my opinion, revisionist history of the sort Dewsbury (1984) proposed is unwarranted by the facts: Watson and Lashley are not adequately characterized as field workers; Thorndike was a general process learning theorist; Henry Nissen and Winthrop Kellogg were not important figures in the history of comparative psychology; and so forth (Burghardt, 1986). The comparative psychology advocated by Klein and Small, implicit in the writings of Craig and Whitman, never developed in North America. It is both counterproductive and unnecessary to argue that it did. There is no need to demonstrate that contemporary orientations in comparative psychology are descended entirely from earlier work in comparative psychology. Exploitation by comparative psychologists of approaches they have ignored for decades is not a disgrace. It is an honest recognition of the fact that comparative psychologists have no monopoly on useful ideas.

There are fundamental differences between biological and intellectual lineages. In the biological world, both speciation and extinction are irreversible events. Intellectual lineages are very different. An intellectual lineage can split into two or more separate lines, each evolving independently for many generations, but this is no real impedement to their reunification. Indeed, the combining of historically distinct intellectual lineages frequently results in an intellectual analogue of "hybrid vigor" rather than sterility or maladaption. Cultural anthropology and sociobiology may be, relatively speaking, as distant from their common ancestor as are birds and mammals from theirs, but recent attempts at hybridization of anthropology and sociobiology have not produced the intellectual equivalent of feathered elephants with rudimentary wings. Combining two historically distinct intellectual lineages has produced ferment and innovation in both (see, for example, Betzig, Borgerhoff-Mulder, & Turke, in press; Daly & Wilson, 1983).

Like speciation, apparent extinction of an intellectual lineage is a transitory phenomenon. Mendel's work was lost for 40 years, dead and buried. Its resurrection in 1900 by Correns, DeVries, and Tschermak was a spectacular instance of a normal occurrence in intellectual history.

Since Darwin, comparative psychology and behavioral biology have developed largely along independent lines. For the past decade or two, comparative psychology and behavioral biology have been reuniting. This is no cause for revisionist history or self-flagellation by comparative psychologists. Comparative psychology had, as Adler et al. (1973) indicated, lost touch with its roots in ecology and evolutionary theory. Behavioral biology had lost interest in questions of ontogeny and behavioral mechanism. Comparative psychologists do not need to reinterpret their past to justify their present or future. They are free both to give new life to extinct branches of their intellectual tree and to join their intellectual tradition with others from which they have been separated for decades. They are also free to continue to pursue, in the future as they have in the past, general mechanisms of behavior in animal models. Both the search for general principles and attention to species-typical behavioral adaptations are valid approaches; either can lead to valuable insight. Availability of alternative perspectives can only enrich our discipline.

Perhaps, in the 200th volume of the *Journal of Comparative Psychology*, we will still be discussing which approach to comparative psychology will make the greatest contribution to knowledge of living systems. I hope, to the contrary, that long before then we will have outgrown the need to endlessly question the validity of what we do and, instead, will have achieved confidence in the fruits of our labor. The contributions of Whitman and Craig, Lehrman, Harlow, Lashley, and Jennings, Carpenter, Thorndike, Tolman, Watson, Kuo, and Schneirla, Yerkes, Köhler, and Carmichael (among others, and in no particular order) are all important in the understanding of behavior. We have a heritage in comparative psychology of which to be proud. Each of us will respond to different aspects of that heritage in orienting our own work, but that is a strength and not a weakness. We need neither to ignore the advances made by those working in other traditions nor to abandon the attempt to examine the proximate causes and development of behavior that has characterized comparative psychology since the early part of the 19th century. Journal pages will be better spent in communicating to the scientific community the insights we achieve than arguing about the intellectual lineage to which those insights should be attributed. Exciting research will do more for the future of the discipline than revisionist histories or calls for return to the true faith.

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1988 APA Convention "Call for Programs"

The APA "Call for Programs" for the 1988 annual convention will appear in the October issue of the *APA Monitor*. The 1988 convention will be in Atlanta, Georgia, from August 12 to August 16. Deadline for submission of programs and papers is December 21, 1987. This early deadline is required because the 1988 convention is earlier in August than in the past. Additional copies of the "Call" will be available from the APA Convention Office in October.